STATE OF CALIFORNIA PETE WILSON, *Governor*

DELTA PROTECTION COMMISSION
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January 10, 1997

To: Delta Protection Commission

From: Margit Aramburu, Executive Director

Subject: CALFED's 1996 Category III Grants
(For Commission Information Only)

In late November, 1996, the Category III Steering Committee selected 23 projects for funding. The grant funds are ten million dollars made available by the California Urban Water Agencies (CUWA) and was the second round of Category III projects funded.

Attached are: (1) the September 18, 1996 request for applications (pages 2-5); (2) the projects which were selected for funding (pages 6-8); and (3) fuller descriptions of the projects which would affect the Delta (pages 9-15). You will note that the "theme" for the grants was "benefit spring run chinook salmon, Delta habitat, and high risk fish species".

The next round of grants is scheduled for Spring of 1997, additional funds may be available from Prop 204, and will be reviewed by the new Ecosystem Roundtable.

CALFED
BAY-DELTA
PROGRAM

1416 Ninth Street, Suite 1155
Sacramento, California 95814

(916) 657-2666
FAX (916) 654-9780

Date: September 18, 1996

To: Interested Party

From: Lester A. Snow, Executive Director
CALFED Bay-Delta Program

Subject: Request for Category III Applications

The Category III Steering Committee is seeking projects or programs that benefit spring run chinook salmon, Delta habitat, and high risk fish species and has asked the CALFED Bay-Delta Program to facilitate distribution of this package for them. These are the priorities identified for the 1996 funding cycle by the Category III Steering Committee.

This package contains information on Category III, instructions for submittal of applications, details regarding the types of projects and programs Category III is seeking and the application format. Please note the deadline for submittal for the 1996 funding cycle is October 21, 1996.

Specifically, applications, in no order of priority, are being sought to do the following:

1. Establish watershed conservancies;
2. Conduct an interdisciplinary evaluation of wetlands habitat in the Delta;
3. Conduct habitat evaluation of the Yolo Bypass;
4. Address stranding in the Deep Water Ship Channel;
5. Develop Delta habitat restoration projects;
6. Develop tools to help identify juvenile salmon by race in the Delta;
7. Evaluate the success of different life history strategies of juvenile salmon in the Delta;
8. Address unscreened diversions in Suisun Marsh;
9. Map riparian habitat along the Sacramento River and its tributaries;
10. Develop innovative measures to address fish screening issues;
11. Investigate the genetic structure and parentage of salmon in the Sacramento River and its tributaries from the Feather River upstream to Keswick Dam;
12. Improve adult fish passage at Ward's Landing;
13. Reconstruct the existing water control structure at Lindo Channel on Big Chico Creek;
14. Develop a spill contingency plan for Deer and Mill Creeks;
15. Address fish passage and screening issues at six location identified in Attachment A;

16. Begin restoration of Battle Creek;
17. Conduct a "state of knowledge review" concerning toxics as a factor influencing chinook salmon and other species.

Category III was established as a result of the December 15, 1994 Bay-Delta Accord. Its charge is to address non-flow factors affecting the health of the Bay-Delta ecosystem. Specific factors identified as part of the Category III mandate include: unscreened water diversions, waste discharges and water pollution prevention, impacts due to harvest, poaching, land derived salts, exotic species, fish barriers, channel alterations, loss of riparian wetlands, and estuarine habitat degradation. The program is currently managed by the Category III Steering Committee and funding arrangements are made through the California Urban Water Agencies (CUWA). The program has approved funding for 16 projects to date which have a total cost of $40.2 million, of which $11.7 million was funded by the Category III Steering Committee. It is anticipated that an additional $10 million will be available to fund Category III projects in October 1996.

In 1996, at the request of the Category III Steering Committee, the CALFED Bay-Delta Program prepared a Guidance Document to provide technical recommendations regarding projects and programs for 1996. The CALFED Bay-Delta Program recommended that the Category III 1996 funding cycle be focussed first toward projects benefiting spring run chinook salmon and second, towards Delta habitat. The Steering Committee approved the Bay-Delta Program's recommendations and added a third priority for "high risk fish species" including efforts on the San Joaquin River.

The Guidance Document was subsequently reviewed at a scientific workshop attended by technical specialists from a variety of agencies and organizations. Proceedings from that meeting are included as Attachment C. Following the workshop, a tiered approach was developed to proceed with the 1996 selection process. The following tiers were adopted: Tier 1 included projects or programs which could be funded with no additional review; Tier 2 included projects or programs where applications had already been submitted or where work had begun on the project through another funding source, but which needed to undergo a feasibility review; and Tier 3 included suggested programs or projects for which applications needed to be developed.

In July, the Steering Committee approved funding for four Tier 1 projects and directed that additional applications be solicited in an open process for the remaining projects in Tier 2 and 3, that all applications be evaluated, and a final funding package be assembled for their review.

Details regarding the types of projects and programs where applications are being solicited for funding by Category III are provided in Attachment A. Attachment B provides the format for submitting projects or programs to address needs outlined in Attachment A.

Instructions for submittal of applications.
Applications using the format in Attachment B should be submitted to the following address:

Ms. Nancy Quan
Metropolitan Water District of Southern California
1121 L Street, Suite 900
Sacramento, CA 95814

Six copies of the application should be submitted to the address above and they must be postmarked no later than October 21, 1996.

If you have previously submitted a application to the Category III Steering Committee, you have the option of reviewing Attachment A and revising your application as needed to follow the new format included in Attachment B and resubmitting your application by the deadline. However, if you do not wish to revise your application, but are still interested in seeking funding from Category III for your original application, please inform Ms. Quan in writing, postmarked by October 21, 1996.

Process for considering applications
The following criteria, in no particular order, will be considered in reviewing applications:

a. Demonstrated understanding of the problem statement (as expressed in the enclosed paper, Restoring Central Valley Spring-Run Chinook Salmon Populations: Technical Workshop to Identify Candidate Programs and Projects for Category III Funding, and Attachment A);
b. Biological benefits of the program or projects;
c. Ability/expertise to carry out such projects/programs, as demonstrated through previous assignments;
d. Specific expertise relevant to the goals;
e. Applicant's capacity to perform the work as specified within the stated time frame;
f. Responsiveness to the scope of work;
g. Degree to which application is supported by local partners, including cost sharing with other funding sources;
h. Proposed total cost;
I. Degree to which approach is cost effective, innovative, and can inform future efforts;
j. Quality and completeness of the monitoring plan for the project;

k. Ecosystem and synergistic benefits, and;
l. Effectiveness as a stand-alone project.

Applications will be acknowledged by postcard when they are received. They will be ranked by a team created by the Category III Steering Committee. Final interviews will be held for short-listed applications. We anticipate that selection of projects for funding will be completed by mid-November, 1996.

If you have any questions, please contact Ms. Cindy Darling at (916) 657-2666.

Enclosures

To: All Interested Parties
From: Wiley Horne & Patrick Wright, Co-Chairs, Category III Steering Committee
Date: 25 November 1996

RE: Newly Selected Category III Programs/Projects

On behalf of the entire Category III Steering Committee, we are pleased to announce results of our most recent round of funding decisions. We would like to take this opportunity to thank all who contributed to this year's process. In particular, we appreciate input provided by participants at our Spring-Run Chinook Workshop, advice offered by team members who helped us prepare the Request for Proposals, and the active participation of our 13 Interview Panel members. Special thanks go to all teams submitting proposals for our review.

Overall, 58 Proposals were submitted by the deadline. These totalled more than $50 million in Category III requests, compared with the $10 million available for distribution in this round. Clearly some difficult decisions were required in crafting the final list of projects and programs to receive funding at this time. In some cases, the Category III Steering Committee modified and conditionally approved projects for funding. In other cases, proposals were of considerable interest to Category III, but were judged to be more appropriate for consideration in future funding rounds.

The attached table lists all of the successful Projects/Programs, Applicants, and the level of Funding to be made available. Successful applicants will be contacted shortly by letter, explaining the Steering Committee's decision, and outlining any conditions or prerequisites. In addition, all teams who submitted proposals that were not selected for funding at this time will be provided with feedback that may be useful in assisting them in improving the competitiveness of future proposals.

As was the case this year, future awards of Category III funds will be guided by the overall CALFED process. All applicants involved in the current round of Category III funding review will be notified of the next funding cycle. The Category III Steering Committee is expected to now transition into the Ecosystem Roundtable which has been established as a subcommittee of the Bay/Delta Advisory Council. The Ecosystem Roundtable will provide input on future Category III funding, including the $60 million provided in the recently passed Proposition 204. In the interim, Metropolitan Water District of Southern California will continue in its role as contract administrator for Category III monies appropriated in this round. If you have any questions regarding Category III funding contracts, please contact Mr. Walt Hoye at Metropolitan at (213) 217-6384. If you have any questions regarding either the results of our current funding decisions, or future operations of the Ecosystem Roundtable, please contact Ms. Cindy Darling at CALFED (916) 657-2666.

Finally, on behalf of the entire Category III Steering Committee we would like to convey our gratitude to all who have helped make this year's process such a success. We firmly believe that the projects in this package represent an important step towards recovering the health of the Bay/Delta ecosystem, and we are proud to have played a role in helping fulfil the goals outlined in the historic Bay/Delta Accord.

xc: Category III Steering Committee/Category III Interested Parties
Category III Interview Panelists/Category III Applicants

November 1996 - Category III / CALFED
Program / Project Selection Process Results

Note: Funding prerequisites have been specified by the Category III Steering Committee for many of the following Projects and Programs.

Projects or Programs Selected to Receive Category III Funding

Project / Program	Applicant	Category III Funds
PCGID/PID pumping station and fish screen design and construction	Lance Boyd Princeton-Codora-Glenn Irrigation District / Provident Irrigation District	$5,500,000
Suisun Marsh fish screens (Phase 2)	Lee Lehman Suisun Resource Conservation District	up to $500,000
Sherman Island levee habitat demonstration project	Curt Schmutte California Department of Water Resources	up to $480,000
Predicting the evolution of ecological functions of restored diked wetlands in the Delta	Charles Simenstad University of Washington	$475,000
Molecular genetic identification of chinook salmon runs, focused on spring-run integrity	Michael Banks Bodega Marine Laboratory	$450,000
Decker Island tidal wetland enhancement	John Sulpizio Port of Sacramento	$399,000
Battle Creek Chinook salmon and steelhead restoration study	Harry Rectenwald California Department of Fish and Game	$230,000
Yolo bypass habitat restoration study	Ted Sommer California Department of Water Resources	$226,000
Clear Creek property acquisition assistance	Steve Borchard Bureau of Land Management	up to $211,000
Developing a research program to address the introduction of non-indigenous aquatic species	Andrew Cohen San Francisco Estuary Institute	$197,000
Sacramento River and major tributaries: corridor mapping project	Charles Nelson California State University, Chico	$145,200
Fish screen for unscreened diversion on Yuba River	R.V. Winchester Browns Valley Irrigation District	$114,750
Effects of toxics on Central Valley Chinook salmon	Phyllis Fox Fox Environmental Management	$110,000
Feasibility study and preliminary design for a positive barrier intake screen at Wilkins Slough Diversions (Phase II)	Luther Hintz Reclamation District 108	$100,000

Project / Program	Applicant	Category III Funds
San Joaquin River to Main Lift Canal intake channel fish screen facility	Andrew Farrar Banta-Carbona Irrigation District	$100,000
Adams Dam fish screen and fish ladder	Dan Boatwright Rancho Esquon Partners	up to $100,000
Gorrill Dam fish screen and fish ladder	Don Heffren Gorrill Land Company	up to $100,000
Durham Mutual fish screen and fish ladder	Dale Nelson Durham Mutual Water Company	up to $100,000
Hydraulic and biological performance testing of an innovative fish screen for small unscreened diversions	Jim Buell Buell and Associates	$90,000
Develop watershed management strategy for Butte Creek	Donald Holtgrieve California State University, Chico	$83,000
Establish Battle Creek Watershed Conservancy	Richard Baumann Western Shasta Resource Conservation District	$50,000
Prospect Island monitoring plan	Leo Winternitz California Department of Water Resources	up to $35,000
Inventory of rearing habitat for juvenile salmon in the north Delta, lower Sacramento, and Cosumnes Rivers	Amy Harris California State University, Sacramento	$24,500
	Total	up to $9,820,450

(28)

Proposal Summary - 1996 Category III

1. **Proposal Title / Factor(s) Addressed:**
   Hydraulic and Biological Performance Testing of an Innovative Fish Screen for Small Unscreened Diversions This proposal addresses the need to make a wider variety of cost-effective, low-maintenance technologies available to solve unscreened diversion problems associated with smaller diversions in the Central Valley. Acceptance and approval of innovative technologies requires a demonstration that these technologies will safely and effectively separate fish from diverted water and allow fish to continue their normal activities unimpaired, whether migrating or maintaining residence.

2. **Contact Person / Project Manager:**
   James W. Buell, Ph.D., Buell & Associates, Inc.

3. **Project Description / Anticipated Benefits:**
   This project will evaluate the feasibility of application of an overflow weir horizontal profile bar screen with 0.5 mm openings to smaller diversions within the Central Valley. The evaluation will include both hydraulic and biological performance tests. **Phase I:** Initial hydraulic tests will be conducted at Coleman Hatchery, or some similar facility where water (up to 6+ cfs) and fish can be made available. A prototype, portable fish screen and water delivery system will be used. Principles of operation of the overflow weir horizontal profile screen system are described in the Proposal. **Phase II:** Biological performance tests using various life stages of juvenile salmonids (fry through smolts) will be conducted at the same facility as Phase I hydraulic testing. Other species may be tested on an "as available" basis. Standard, generally accepted performance criteria will be used to evaluate biological performance. **Phase III:** The portable prototype will be transported to a suitable existing diversion site for field testing. Additional data on debris shedding as well as information on fish entrained and injury due to entrainment will be gathered.

   Anticipated benefits include 1) making available a new, practical, low-cost, low-maintenance, compact, standard design, modular fish screening technology, 2) extending screening capability to smaller life stages than presently feasible, 3) helping to form a baseline on entrainment-associated injury which can be used to evaluate "fish friendly" pumps, and 4) enabling a re-assessment of the relative importance of existing approach velocity and sweeping velocity criteria applied to a screening system with exposure times of only a fraction of a second.

4. **Schedule / Deliverables:**
   Phase I (Construction, hydraulic testing): Less than 10 weeks from Notice to Proceed.
   Phase II (Biological performance testing): By 31 July 1997, assuming availability of fish.
   Phase III (Field testing): By 30 November 1997, unless extended for additional information.

5. **Project Cost / Funding Partners:**

Phase I:	$ 35,000
Phase II:	25,000
Phase III:	30,000
	$ 90,000

No funding partners have been sought for Phases I and II.
Funding partners may be identified for extension of Phase III.

Proposal Summary - 1996 Category III / Calfed

1. **Project Title/Factor Addressed:** Predicting the Evolution of Ecological Functions from Restoration of Diked Wetlands in the Sacramento River/San Joaquin River Delta

2. **Contact Person / Project Manager:** Charles A. Simenstad; Coordinator, Wetland Ecosystem Team, School of Fisheries, University of Washington

3. **Project Description / Anticipated Benefits:**

We propose an interdisciplinary, consortium-based research project to **determine the potential of wetland restoration in the Delta to support critical fish and other aquatic resources habitat functions by assessing the recovery period and the long-term prognosis of restoring function to former wetlands that have been historically diked.** Results of this project would provide critical information necessary to predict whether breached-dike restoration strategies that may be proposed under CALFED would provide the expected wetland functions of providing rearing habitat for spring run chinook salmon, other fishes and aquatic and terrestrial resources. Rather than depending upon long-term ecological databases on tidal wetland development, which are essentially unavailable for this region, we will adopt a "*space-for-time substitution*" approach using the age distribution of selected (~10) historically breached-dike sites, as compared to ~5 undisturbed 'reference' sites, to predict patterns and rates of restoration of breached-dike wetland restoration. Our objectives are to: (a) assess hydrological, geomorphological, biogeochemical and ecological indicators at differently-aged sites of formerly diked wetlands that have historically reverted to tidal inundation; (b) compare indices of spring chinook salmon and other faunal habitat quality of these naturally breached-dike and artificially restored sites to adjacent reference sites; and (c) using the same indicators, compare the status of these restored wetlands to wetland function at natural marsh sites. Ultimately we intend to develop conceptual models that describe "trajectories" of natural fish and wildlife habitat functions in breached-dike restoration sites, and factors that dictate the shape and rate of development of these trajectories.

The consortium would merge the expertise and experience of the Wetland Ecosystem Team (School of Fisheries, University of Washington) [tidal wetland/fish ecology], Louisiana Marine Universities Marine Consortium [sedimentology], and Philip Williams and Associates [tidal hydrology/geomorphology]. This integrated team would conduct a 2-yr study of both naturally- and artificially-breached dike and comparable reference wetland sites in the Delta to systematically evaluate the rate, pattern and long-term success of breached-dike restoration. In addition, we propose to coordinate extensively with the State of California's Interagency Ecologic Program's (IEP) estuarine program in their monitoring of fish assemblages in the Delta and the US Geological Survey in their assessment of agriculture-based contaminants in the region.

The project would: (1) provide the opportunity to open a window to predictions of estuarine wetland restoration success and (2) initiate one of the few attempts to systematically and comprehensively assess restored wetlands in comparison with 'surviving' wetlands in this region. Any broad-scale, landscape perspective of wetland restoration in the Delta as envisioned by the CALFED would benefit from such an assessment of dike-breach restoration under historic and present conditions, and would specifically address potential of restoring habitat integrity for critical resources such as Pacific salmon that may be currently inhibited by the status of estuarine wetlands in the Delta.

4. **Schedule / Deliverables**

Our anticipated products would include: (1) inventory and databases on all sites; (2) images documenting geomorphic and other changes since ca 1930 at 10-15 selected sites; (3) hydrogeomorphic and vegetation community analyses of the structural changes; (4) geomorphic and ecological analyses of selected indicators of habitat function; and (5) a synthesis report and scientific journal publications describing patterns and rates of estuarine habitat function, factors controlling the probability and time to functional equivalency, and recommendations to CALFED for dike-breaching criteria as part of its ecosystem-scale restoration strategy in the Delta. Research would commence in winter 1996-1997, with intensive field investigations in spring-summer 1997 and spring 1998. Results will be provided to CALFED in two stages: (1) an initial Interim Report, describing existing breached-dike restoration sites, pre- and post-dike breach histories of the selected sites, and preliminary assessment of their functional performance; and (2) a Final Report, that updates the Interim Report information and completes the results of latter phases (V-VI).

5. **Project Costs / Funding Partners**

Estimated costs are $350,000 <u>exclusive</u> of specific juvenile spring chinook salmon investigations, which are extensive and require considerable more continuous presence on the Delta by the WET than required for the other tasks. We encourage CALFED to consider direct support the IEP to provide their expertise and experience for these fisheries investigations; however, WET is prepared and has the expertise to conduct these investigations with IEP cooperation, the associated total cost with the extensive fish sampling and sample analyses would be approximately $475,000. No direct support is provided by partners in the proposed study; however, PWA, LUMCON and USGS will provide in-kind matching in the form of staff and sampling and analytical equipment time.

Proposal Summary - 1996 Category III/CALFED

1. Proposal Title: YOLO BYPASS STUDY. Factors addressed: a) unscreened diversions, b) waste discharge/pollution prevention, g) habitat restoration, h) channel alterations and i) fish passage/barriers.

2. Contact Person/Project Manager: Ted Sommer and Leo Winternitz, California Department of Water Resources, 3251 S Street, Sacramento CA 95816. Phone (916)227-7537, Fax (916) 227-7554, Email: tsommer@water.ca.gov, lwintern@water.ca.gov.

3. Project Description/Anticipated Benefits. The Yolo Bypass is of particular interest in wet years, when a substantial portion of Delta inflow originates from this region. Initial data suggests that the system supports an impressive diversity of native and non-native fish species and is a major source of organic material to the Estuary. However, there is also strong evidence that the Yolo Bypass may be an important source of mortality for salmon and other species which become stranded after floodwaters recede.

In recognition of these values and risks, modifications to the Bypass are presently being discussed as a component of the CALFED alternatives. The present study is designed to provide supporting data and technical recommendations.

The study would be performed by an Interagency Ecological Program (IEP) team with expertise in fisheries, estuarine ecology, contaminants, sediment transport and GIS. The primary issues to be addressed include: development of techniques to sample Bypass habitats; estimation of the number of fish diverted into, and emigrating from, the Bypass (if feasible); location of habitats used for fish rearing; measurement of growth rates and condition factors of salmon in the Yolo Bypass versus the Sacramento River; examination of the contribution of the Yolo Bypass to the estuarine food chain; identification of the locations where ponding occurs; and measurement of contaminant levels in the Bypass.

Major benefits of the study include identification of problem areas (eg fish stranding and toxics), description of the benefits of existing habitat to fisheries, and the development of a better understanding of how the Bypass is linked to the rest of the Estuary. The final product from this work would include specific recommendations on how Yolo Bypass habitat could be improved for fisheries.

4. Schedule and Deliverables: We expect the evaluation to take two or three years provided that the bypass floods in one of the first two study years. The schedule for deliverables varies depending on hydrology. The deliverables will include a detailed study plan, progress reports (3-6), draft and final reports.

5. Project Costs/Funding Partners. The total request from Category III is $226,000. IEP is expected to provide an $30,000 in 1997--additional IEP funding is possible in later years.

Proposal Summary - 1996 Category III/CALFED

Proposal Title / Factor(s) Addressed

Decker Island Tidal Wetland Enhancement Pilot Project: A Proposal to Evaluate Anadromous and Resident Fisheries Shallow-Water Habitat Restoration

Contact Person / Project Manager
Tom Scheeler, Director of Engineering
Port of Sacramento
1251 Beacon, Suite 210
West Sacramento, CA 95691
Phone: (916) 371-8000, Extension 350; Fax: (916) 372-4802

Project Description / Anticipated Benefits

LOCATION
The project site is the 140-acre portion of Decker Island owned by the Port of Sacramento adjacent to the original Sacramento River channel at Horseshoe Bend near Rio Vista. The project site was formerly a tidal marshland and is currently used for livestock grazing.

PROJECT FEATURES
1. Remove sections of levee at south end of island to restore natural tidal regime.
2. Excavate graduated shallow water channels to promote the ecosystem function of the tidal shallow water habitat.
3. Enhance microtopography of tidal wetland zone and riparian and aquatic habitat diversity with excavated material.
4. Convert grazing lands to natural ecosystem regeneration through prescribed burns and plantings.
5. Enhance existing tule and riparian habitat along the margins of the island.

ANTICIPATED BENEFITS
- Re-establish *self-perpetuating* tidally influenced wetland habitat that directly benefits special-status aquatic species (e.g., spring-run and winter-run chinook salmon, delta smelt and Sacramento splittail).
- Structure the enhancements and monitoring program as a *pilot project* that provides species, habitat and monitoring knowledge that directly benefits future larger-scale Delta restoration plans.
- Test and assess multiple sampling techniques (e.g. beach seines and trawls) for aquatic species while minimizing the potential for adverse effects to such species.

Schedule / Deliverables

12/96	Develop final draft design and monitoring plan specifications and provide to CALFED and IEP Resident Fish Work Teams. Obtain scientific collection permit for baseline data gathering.
12/96 - 6/97	Remove grazing, execute agreement for project and begin baseline data collection.
1/97	Hold workshop with CALFED and IEP Resident Fish Work Teams to finalize plan specifications.
1/97 - 5/97	Complete CEQA Negative Declaration and permit processes.
4/97 - 6/97	Develop construction specifications, bid review process and award construction contract.
7/97	Construct habitat enhancements and perform vegetation management and plantings.
7/97 - 12/2002 - 2004	Complete intensive two-year fishery and terrestrial habitat monitoring. Detailed reports annually to CALFED and IEP Resident Fish Work Teams. Quarterly monitoring and reporting thereafter.

Project Costs / Funding Partners

1997	$218,000
1998 - 1999	$133,000
2000-2002 / 2004	$23,000
Contingency	$25,000
Total Category III	$399,000

Proposal Summary - 1996 Category III/CALFED

1. Proposal Title/Factor(s) Addressed: Sherman Island Levee Habitat Demonstration Project. A demonstration of habitat creation that aids in levee protection.

2. Contact Person/Project Manager: Curt Schmutte, DWR Central District, 3251 "S" Street, Sacramento, California 95816. Telephone: (916) 227-7567. Fax: (916) 227-7600. E-mail: schmutte@water.ca.gov.

3. Project Description/Anticipated Benefits: This demonstration project will develop waterside and land side elements to improve levee bank stabilization, shallow water habitat, and riparian habitat along a linear stretch of Sherman Island. The project entails creation of small islands, peninsulas, and waterside berms on and adjacent to the southern end of Sherman Island. Several features of the selected area which enhance success in constructing the site are: availability of materials for construction of the berm, the lack of established wetlands along the levee, the hydrology of the adjacent channel, adequate channel capacity, and the State of California ownership of the project site under the jurisdiction of the Department of Water Resources.

The following benefits will result from the demonstration project: creation of habitat, levee protection, data collection, flood control, demonstration of beneficial reuse, sediment/toxicant retention, overall water quality, and potential local community benefits.

Curt Schmutte will be project manager for the project. He has managed more than $30 million of Delta flood control and habitat development projects. He is also the program manager of the Levee System Integrity Component of CALFED. DWR in coordination with Jones & Stokes Associates, Inc., will refine the current design parameters and complete environmental documentation. The final design and construction of the project will be in coordination with the Sherman Island Reclamation District 341 engineers, Hanson Engineering. Construction is scheduled to take place during the summer of 1997. Monitoring, reporting, and operating the project will be the responsibility of DWR in coordination with DFG.

4. Schedule/Deliverables: Biological, geotechnical, and engineering investigations; preparation of CEQA documentation; and appropriate permit applications will be completed by April 1, 1997. This will allow for permits to be issued before August 1997. Construction is scheduled to begin in August 1997 and continue through September and possibly October 1997. Monitoring will take place throughout 1997-2000, and annual monitoring reports will be completed each October.

Progress reports will be completed and distributed to all interested parties. Monthly coordination meetings will be held for all interested parties.

5. Project Costs/Funding Partners: Funding will be provided by DWR, Category III, and possibly the Wildlife Conservation Board. Currently, DWR has $150,000 secured. A proposal for $50,000 has been submitted to the Wildlife Conservation Board. It is proposed that Category III will provide $760,000.

1. Project Title/ Factor Addressed

Inventory of Rearing Habitat for Juvenile Salmon in the North Delta and Lower Sacramento and Cosumnes Rivers/ Evaluation of the Success of Different Life History Strategies of Juvenile Salmon in the Delta/ Developing Tools To Help Identify Juvenile Salmon By Race in the Delta

2. Contact Person/ Project Manager

Amy Harris
Graduate student, Biological Conservation
CSU, Sacramento
harrisae@csus.edu

2904 Carolyn Way
Sacramento CA 95818
(916) 448-4152 / (916) 325-4065
fax: (916) 446-0143

3. Project Description/ Anticipated Benefits

I am proposing to conduct a survey of rearing habitat for juvenile salmon in the north delta area. For this project I would survey existing rearing habitat (as well as restored habitat) in the delta region, including documentation of the seasonal presence and the growth and condition of juvenile salmon. In addition, scales would be taken from the fish for evaluation of the potential to distinguish races of juvenile salmon in the delta by scale analysis.

Benefits anticipated include documentation and evaluation of rearing habitat for juvenile chinook in the delta region, including presence and timing of use of these habitats. Habitat evaluation will be conducted through comparison of temperature, growth and condition factors of the juvenile fish, and comparison of existing versus restored habitats. Scale analysis will be evaluated as a tool for identification of juvenile salmon in the delta region.

4. Schedule/ Deliverables

The proposed project would include the following timeline:

- December 1996: Obtain agreement from the Department of Fish and Game and the U.S. Fish and Wildlife Service on collecting permit modifications; obtain collecting equipment
- January 1997- June 1997: Conduct sampling as described in methodology section; provide quarterly reports to CALFED agencies
- July 1997-September 1997: Analysis of data taken, including analysis of scales taken from juvenile chinook salmon
- October 1997: Deliver draft report and map of surveyed areas to CALFED agencies, including recommendations for habitat restoration and scale analysis of juvenile chinook salmon
- December 1997: Deliver final report to CALFED agencies

5. Project Costs/ Funding Partners:

The total cost of the project is $28,800, including the $24,500 requested in the proposal to the Category III Steering Committee and $4,300 requested in a proposal submitted to The Nature Conservancy.

Proposal Summary - 1996 Category III/CALFED

1. Proposal Title: PROSPECT ISLAND MONITORING PLAN: A Proposal to Address the Benefits of Riparian/Wetland Habitat Restoration.

2. Contact Persons: Leo Winternitz, California Department of Water Resources, 3251 S Street, Sacramento CA 95816. Phone (916) 227-7548, Fax (916) 227-7554, E-mail: lwintern@water.ca.gov.

3. Project Description/Anticipated Benefits: Prospect Island is located in Solano County, between the Ship Channel on the west and Miner Slough on the east. The major features of the Project include restoration of 1,300 acres of shallow-water, tidal wetlands, and aquatic habitat. The existing levees will be breached in two locations to restore full tidal action. Also, the Project will restore approximately 130 acres of riparian/wetland habitat along levees and on several islands which will be constructed on site.

The purpose of the Prospect Island Restoration Project is to provide spawning and rearing habitat for federally listed delta smelt, proposed Sacramento splittail, rearing habitat for federally listed winter run chinook salmon and other anadromous fish, habitat for federally listed waterfowl and shorebirds and high quality riparian, shaded riverine aquatic, wetland mudflat, freshwater tidal marsh, upland and open water habitat for a wide variety of aquatic and terrestrial species in the delta.

Proposed monitoring of Prospect Island would be performed by an Interagency Ecological Project Work Team. The objectives of the monitoring plan would be to evaluate the biological, chemical, and physical effects of the restoration project. The primary issues to be addressed include: fisheries, wildlife, vegetation, phytoplankton, zooplankton, benthic community, water quality, and bathymetry.

Currently, no funding mechanism for monitoring of Prospect Island has been established. However, monitoring is necessary to determine the benefits of the project. Furthermore, it is important to establish a precedent for future pre- and post-project monitoring for future restoration projects in the Delta.

4. Schedule and Deliverables: Proposed monitoring is to be conducted for three consecutive years following the completion of the Project. A schedule describing the dates of construction has not been released, so it is unclear when monitoring will begin and end. Deliverables include a detailed study plan, quarterly reports, and an annual monitoring report. The data will also be made available over the Internet via the IEP Home Page.

5. Project Costs/Funding Partners: The total request from Category III is $615,000. IEP is expected to contribute additional funding, and potentially provide comparison sampling on Liberty Island and Little Holland Tract.